ASSESSMENT OF HIDDEN FLOWS IN THE SHADOW ECONOMY OF THE CONSTRUCTION INDUSTRY

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Abstract. The construction sector in Latvia is notably vulnerable to shadow economy activities, where undeclared financial flows undermine tax compliance. This study applies a data-driven approach using Stochastic Frontier Analysis (SFA) to estimate hidden turnover and tax shortfalls in three construction subsectors: building construction (F41), civil engineering (F42), and specialized construction activities (F43). Based on official financial and tax data from 2020–2023, two modeling approaches were used: financial flow models linking resource inputs to revenue, and capital accessibility models assessing turnover potential from investment levels. Findings reveal that approximately 25% of companies exhibit signs of undeclared turnover, with an average gap of 35%. Estimated annual VAT shortfalls range from €24.0–25.5 million (financial flow models) to €65.0 million (capital models), while corporate income tax (CIT) gaps range from €5.0–5.8 million, or up to €12.3 million depending on methodology. The study confirms the effectiveness of stochastic frontier-based modeling in quantifying tax gaps and supports policy development for shadow economy mitigation. Conducted by Riga Technical University in collaboration with the Ministry of Finance and the State Revenue Service, the research offers a scalable framework for improving transparency and resilience in economic governance.

Keywords: *shadow economy, construction industry, tax gap, stochastic frontier analysis, data-driven approach.*

JEL Classification: H26, O17